

REMARKS

Claims 1-19 are pending in this application. By way of this Amendment, Applicants have removed minor informalities from the specification and claims 1-19 and have canceled claim 20. No new matter has been introduced by this Amendment.

Claims 3, 6, and 17 stand rejected as allegedly indefinite under 35 U.S.C. § 112, second paragraph.

Claims 1-7 and 10-20 stand rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 6,203,683 to Austin et al. ("Austin").

Claims 8 and 9 stand rejected under 35 U.S.C. § 103(a) as allegedly obvious over Austin.

35 U.S.C. § 112 Rejection

Solely for the purpose of facilitating prosecution of this Application, Applicants have amended claims 3, 6, and 17 in accordance with the Examiner's remarks. Accordingly, those claims use terms consistently and are in compliance with 35 U.S.C. § 112.

35 U.S.C. § 102(e) Rejection

The Examiner rejected claims 1-7 and 10-20 as allegedly anticipated by Austin. Claim 1 recites a miniature analytical device including, *inter alia*, the following limitations:

. . . an array of heat sources, wherein the array of heat sources is positioned to correspond to the array of temperature-controlled zones and regulates temperature in the zones.

(Claim 1).

Austin fails to teach or suggest at least such an array of heat sources as recited in claim 1. Instead, Austin, in Figure 1, teaches microfluidic channels 16 and a single trapping electrode 18 that thermocycles polyelectrolytes within the microfluidic channels 16. Specifically, Austin teaches “*The trapping electrode is preferably positioned essentially perpendicular to the microchannels.*” Col. 4, lines 8-9 (emphasis added). Additionally, Austin discloses “[a]n array of one or more additional trapping electrodes” within a single *microfluidic channel* for “implement[ation] downstream to refocus or otherwise re-treat the polyelectrolyte.” Col. 7, lines 21-26. This, however, does not teach “an array of heat sources, wherein the array of heat sources is positioned to correspond to the array of temperature-controlled zones and regulates temperature in the temperature-controlled zones.” Claim 1. Accordingly, claim 1 is patentable over Austin, MPEP § 2131, and Applicants respectfully request the Examiner to allow claim 1 as amended.

As claims 2-7 and 10-18 either directly or indirectly depend from patentable claim 1, as amended, they are also patentable for at least the same reason as claim 1.

Claim 19 recites a method of thermal regulation including, *inter alia*, the following limitation:

“...and modifying at least one absorptive property of the reactants.” (Claim 19 as amended). Austin fails to teach at least such a modifying step as recited in claim 19. The Examiner relies on column 12, lines 49-61 in alleging that Austin discloses “modifying at least one absorptive property of said reactants.” (Office Action at page

5). However, Austin discloses “[labeling] dideoxy chain terminators . . . with fluorescent dyes” or using “resonance energy transfer-labeled fluorescent primers,” for identification, col. 12, lines 54-55 and 59-60, or detection, see, e.g., col. 11, lines 48-52, “[t]he method of detection uses a fluor that fluoresces strongly only when bound to the double stranded DNA product, shows little or no auto fluorescence when not bound to DNA, and does not inhibit the DNA polymerase chain reaction.” Nowhere does Austin teach or suggest “[a] method of thermal regulation” including “modifying at least one absorptive property of at least one of the reactants.” (Claim 19 as amended). Accordingly, claim 19 is patentable over Austin, MPEP § 2131, and Applicants respectfully request the Examiner to allow claim 19 as amended.

35 U.S.C. § 103(a) Rejection

The Examiner rejected claims 8 and 9 as being obvious over Austin. As claims 8 and 9 indirectly depend from patentable claim 1, they are also patentable for at least the same reason as claim 1.


In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to deposit account 50-1078.

Respectfully submitted,

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Dated: February 2, 2004

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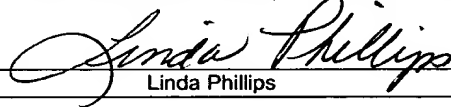
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Linda Phillips